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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/869,492	06/28/2001	Alan Anderson Hoover	RCA 89855	4186

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EXAMINER
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MICHALSKI, JUSTIN I

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/869,492	<b>Applicant(s)</b> HOOVER, ALAN ANDERSON	
	<b>Examiner</b> Justin Michalski	<b>Art Unit</b> 2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. <u>1/31/06</u> |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                                 |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see page 5, filed 5 January 2005, with respect to the rejection(s) of claim(s) 1-4, 10, 15 and 16 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Klayman.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims are rejected under 35 U.S.C. 102(e) as being anticipated by Klayman (US Patent 6,597,791).

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Regarding Claim 1, Klayman discloses a stereophonic expansion circuit, comprising: means for processing (L+R) and (L-R) signals (16 and 32), and means for providing tonal compensation for the (L+R) signal by increasing an amplitude of the (L+R) signal in a bass frequency band relative to a mid-range frequency band (36).

Regarding Claim 3, Klayman further discloses wherein the (L-R) signal is processed by increasing an amplitude of the (L-R) signal in the mid-range frequency band (40).

Regarding Claim 15, Klayman discloses a method for providing stereophonic expansion, comprising: generating (L+R) and (L-R) signals (16 and 32), and providing tonal compensation for the (L+R) signal by increasing an amplitude of the (L+R) signal in a treble frequency band relative to a mid-range frequency band (36).

4. Claims 2 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Holt et al. ("Holt") (US patent 4,803,727).

Regarding Claims 2 and 16, Holt discloses a stereophonic expansion circuit, comprising: means for processing (L+R) and (L-R) signals, and means for providing tonal compensation for the (L+R) signal by increasing an amplitude of the (L+R) signal in a bass frequency band (48) relative to a mid-range frequency band (2kHz; Col. 5, lines 20-34) wherein the tonal compensation is further provided by increasing the amplitude of the (L+R) signal in a treble frequency band (49) relative to the mid-range frequency band.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klayman (US Patent 6,597,791)

Regarding Claim 4, Klayman does not explicitly disclose wherein the (L+R) signal is tonally compensated to be complementary to a frequency curve of the (L-R) signal. Klayman discloses that adjustment of the devices 36 and 38 is typically performed manually by a user control where an increase in the level of the sum signal emphasizes the audio signal appearing at a center stage position between a pair of speakers. Conversely, an increase in the level of the difference signal emphasizes the ambient sound information creating the perception of a wider sound image (Col. 4, lines 42-53). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to produce complementary curves to produce a sound image for a stereophonic signal.

Regarding Claim 10, Klayman discloses a stereophonic expansion circuit having (L+R) and (L-R) signal paths (116 and 32) including circuitry operative to provide tonal compensation for the (L+R) signal path by increasing an amplitude of an (L+R) signal in a bass frequency band and a treble frequency band relative to a mid-range frequency band (36), and wherein the tonal compensation of the (L+R) signal path is

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approximately complementary to a tonal frequency response of the (L-R) signal path. Although Klayman does not disclose the tonal compensation of L+R signal path is approximately complementary to a L-R frequency response, Klayman discloses that adjustment of the devices 36 and 38 is typically performed manually by a user control where an increase in the level of the sum signal emphasizes the audio signal appearing at a center stage position between a pair of speakers. Conversely, an increase in the level of the difference signal emphasizes the ambient sound information creating the perception of a wider sound image (Col. 4, lines 42-53). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to produce complementary curves to produce a sound image for a stereophonic signal.

7. Claims 5-9, 11-14, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klayman as applied to claim 1 above in view of Lendaro et al. (Hereinafter "Lendaro") (US Patent 5,208,493).

Regarding Claims 5, 11, and 17 Klayman discloses a device as stated above but does not disclose tonal compensation can be switched between "on" and "off" modes. Lendaro discloses a stereo expansion selection switch (Figs. 1-3) to allow a user to selectively actuate or deactuate the stereo expansion circuitry of an audio system (Col. 1, lines 6-9). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include an "on" and "off" switch in order to allow a

user to selectively actuate or deactuate the stereo expansion circuitry of an audio system as taught by Lendaro.

Regarding Claims 6, 12, and 18 Lendaro further discloses stereophonic expansion can be switch between "on" and "off" modes and the tonal compensation is switched "off with the stereophonic expansion is switched "off" (Figs. 1-3).

Regarding Claims 7, 13, and 19 Klayman further discloses gain boost (Figs. 3 and 5).

Regarding Claims 8, 14, and 20 Lendaro further discloses the tonal compensation and expansion are "off" when switched "off".

Regarding Claim 9, Klayman further discloses the tonal compensation for the (L+R) signal is provided with respect to the (L-R) signal (Fig. 1, phase shifter 14).

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Petroff (US Patent 5,872,851) and Klayman (4,748,669) disclose modification of (L+R) signal.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Michalski whose telephone number is (571)272-7524. The examiner can normally be reached on M-F 7-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571)272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JIM

February 1, 2006



HUYEN LE  
PRIMARY EXAMINER